\_\_\_\_\_\_

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2011; month=3; day=4; hr=16; min=1; sec=32; ms=783; ]

\_\_\_\_\_

## Validated By CRFValidator v 1.0.3

Application No: Version No: 10566386 1.0

Input Set:

Output Set:

**Started:** 2011-02-24 16:29:17.266 Finished:

2011-02-24 16:29:24.841

Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 575 ms

Total Warnings: 18 Total Errors: 0

No. of SeqIDs Defined: 20

> Actual SeqID Count: 20

Error code		Error Description									
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(1)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(4)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(5)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(6)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(7)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(8)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(9)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(10)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(11)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(12)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(13)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(14)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(15)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(16)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(17)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(18)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(19)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(20)

## SEQUENCE LISTING

```
<110> AURIAULT, CLAUDE
     PANCRE, VERONIQUE
     LONE, YU-CHUN
     PAJOT, ANTHONY
     LEMONNIER, FRANCOIS
<120> TRANSGENIC MICE HAVING A HUMAN MAJOR HISTOCOMPATIBILITY
     COMPLEX (MHC) PHENOTYPE, EXPERIMENTAL USES AND
     APPLICATIONS
<130> 03715.0152-00000
<140> 10566386
<141> 2011-02-24
<150> PCT/IB04/002374
<151> 2004-07-05
<150> 60/490,945
<151> 2003-07-30
<160> 20
<170> PatentIn Ver. 3.3
<210> 1
<211> 4547
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Synthetic
     construct
<400> 1
gaattettag gtttaaatae attgttttat ggattttaat acateeatet acagageeta 60
gcagggtgtc cttggcagtt gtcttttaat acctcatgtg ggtctgccta aaaactaatt 120
ttttatgtta atcaggttta aaaaatacta agtgttccta taaaatatac acaacactta 180
gaagtggata cttcctaaaa acaggcagtg catgagcact agtgaggggc attgtgagtg 240
cattgaacag ttgcaacttt gaggtgaata aagcctgtaa tcgcttctgg ttgcaacata 300
taggaacaca gtcgctactt tgtattgagg agatgtcctg gactcacaca gaaactcaga 360
gctatggaat gatggtaaat ttaaaatact acaaccagga gtcacagata cattgtctgg 420
gaaactgcaa cttagtagct ttgtgagtcc tgttgtaagg cttttggaca catttataca 480
tcaaggggct aaagtcacat tttttaccta ttagattcct gatcattcag gggttaccaa 540
gattctgcta cccactgtag ttaataaaca aagagcaaat tggtctctat tctgtctcat 600
gcactcaggc gcaactcttc ccgattaaaa acaaaaacaa caacaacaaa aatctacacc 660
tccattccca gagcaagctt actctctggc accaaactcc atgggatgat ttttcttcta 720
gaagagtcca ggtggacagg taaggagtgg gagtcaggga gtccagttca gggacagaga 780
ttacgggata aaaagtgaaa ggagagggac ggggcccatg ccgagggttt ctcccttgtt 840
teteagacag etettgggee aagaeteagg gagaeattga gaeagagege ttggeacaga 900
agcagagggg tcagggcgaa gtcccagggc cccaggcgtg gctctcaggg tctcaggccc 960
cgaaggcggt gtatggattg gggagtccca gccttgggga ttccccaact ccgcagtttc 1020
```

ttttctccct ctcccaacct atgtagggtc cttcttcctg gatactcacg acgcggaccc 1080 agttctcact cccattgggt gtcgggttc cagagaagcc aatcagtgtc gtcgcggtcg 1140

```
cggttctaaa gtccgcacgc acccacggg actcagattc tccccagacg ccgaggatgg 1200
ccgtcatggc gccccgaacc ctcgtcctgc tactctcggg ggctctggcc ctgacccaga 1260
cctgggcgat ccagcgtact ccaaagattc aggtttactc acgtcatcca gcagagaatg 1320
gaaagtcaaa tttcctgaat tgctatgtgt ctgggtttca tccatccgac attgaagttg 1380
acttactgaa gaatggagag agaattgaaa aagtggagca ttcagacttg tctttcagca 1440
aggactggtc tttctatctc ttgtactaca ctgaattcac ccccactgaa aaagatgagt 1500
atgectgeeg tgtgaaceat gtgaetttgt cacageecaa gatagttaag tgggategag 1560
acatgggagg tggcggatcc ggcggaggcg gctcgggtgg cggcggctct ggatctcact 1620
ccatgaggta tttcttcaca tccgtgtccc ggcccggccg cggggagccc cgcttcatcg 1680
cagtgggcta cgtggacgac acgcagttcg tgcggttcga cagcgacgcc gcgagccaga 1740
ggatggagcc gcgggcgccg tggatagagc aggagggtcc ggagtattgg gacggggaga 1800
cacggaaagt gaaggcccac tcacagactc accgagtgga cctggggacc ctgcgcggct 1860
actacaacca gagegaggee ggtgagtgae eeeggeeegg ggegeaggte aegaeetete 1920
attccccacg gacgggccag gtcgcccaca gtctccgggt ccgagatccg ccccgaagcc 1980
gegggaeeee gagaeeettg eeeegggaga ggeeeaggeg eetttaeeeg gttteatttt 2040
cagtttaggc caaaaatccc cccaggttgg tcggggcggg gcggggctcg ggggaccggg 2100
ctgaccgcgg ggtccgggcc aggttctcac accgtccaga ggatgtatgg ctgcgacgtg 2160
gggtcggact ggcgcttcct ccgcgggtac caccagtacg cctacgacgg caaggattac 2220
ategecetga aagaggaeet gegetettgg acegeggegg acatggeage teagaceaee 2280
aagcacaagt gggaggcggc ccatgtggcg gagcagttga gagcctacct ggagggcacg 2340
tgcgtggagt ggctccgcag atacctggag aacgggaagg agacgctgca gcgcacgggt 2400
accaggggcc acggggcgcc tccctgatcg cctgtagatc ctgtgtgaca tacctgtacc 2460
ttgtcctcca gagtcagggg ctgggagtca ttttctctgg ctacagactt tgtgatggct 2520
gttcactcgg actgacagtt aacgttggtc agcaagatga ccacaatggt tgagtctcag 2580
tggtgggacc cttccagtag catatgcccc taattttgat atgaactcaa acagatatta 2640
aattacttat tttccattcc ctattccatt ctgtgactat ctctctcatg ctattgaaca 2700
tcacataagg atggccatgt tcacccactg gctcatgtgg attccctctt agcttctttg 2760
teceaaaaga aaatgtgeag teetgtgetg aggggaeeag etetgetttt ggteaetagt 2820
gcaatgacag tgtagtgtca aatagacaca tagttcactc tcatcattga tttaactgag 2880
tettgtgtag attteagttt gtettgttaa ttgtggaatt tettaaatet teeacacaga 2940
ttccccaaag gcacatgtga cccatcaccc cagatctaaa ggtgaagtca ccctgaggtg 3000
ctgggccctg ggcttctacc ctgctgacat caccctgacc tggcagttga atggggagga 3060
gctgacccag gacatggagc ttgtggagac caggcctgca ggggatggaa ccttccagaa 3120
gtgggcatct gtggtggtgc ctcttgggaa ggagcagaat tacacatgcc gtgtgtacca 3180
tgaggggctg cctgagcccc tcaccctgag atggggtaag gagggtgtgg gtgcagagct 3240
ggggtcaggg aaagctggag ccctctgcag accctgagct ggtcagggat gagagctggg 3300
gtcataaccc tcaccttcat ttcctgtacc tgtccttccc agagcctcct ccgtccactg 3360
actettacat ggtgategtt getgttetgg gtgteettgg agetatggee ateattggag 3420
ctgtggtggc ttttgtgatg aagagaagga gaaacacagg taagaaaggg cagggtctga 3480
gttttctctc agcctccttt agaagtgtgc tctgctcatt aatggggaac acagccacac 3540
cccacattgc tactgtctct aactgggtct gctgtcagtt ctgggaattt ccagtgtcaa 3600
gatetteett gaaeteteae agettttett tteacaggtg gaaaaggagg ggaetatget 3660
ctggctccag gttagtgtgg ggacaggatc gtctggggga cattggagtg aagttggaga 3720
tgatgggagc tctgggaatc cataatagct cctccagaga aatcttctag gggcctgagt 3780
tgtgccatga agtgaataca ttcatgtaca tatgcatata catttgtttt gttttaccct 3840
aggeteeeag agetetgaaa tgteteteeg agattgtaaa ggtgacaete tagggtetga 3900
ttggggaggg gcaatgtgga catgattggg tttcagggac tcccagaatc tcctgagagt 3960
gagtggtggg ttgctggaat gttgtcttca cagtgatggt tcatgactct cattctctag 4020
cgtgaagaca gctgcctgga ctgtactgag tgacagacga tgtgttcagg tctctcctgt 4080
gacatccaga gccctcagtt ctctttacac aacattgtct gatgttccct gtgagcttgg 4140
gttcagtgtg aagaactgtg gagcccagcc tgccctgcac accaggaccc tatccctgca 4200
etgecetgtg tteeetteea tagecaacet tgetgeteea gecaaacaet gggggaeate 4260
tgcatcctgt aagctccatg ctaccctgag ctgcagctcc tcacttccac actgagaata 4320
ataatttgaa tgtgggtggc tggagagatg gctcagcgct gactgctctt ccaaaggtcc 4380
tgagttcaaa tcccagcaac cacatggtgg ctcacaacca tctgtaatgg gatctaacac 4440
cetettetge agtgtetgaa gacagetaca gtgtacttac atataataat aaataagtet 4500
ttaaaaaata atttgaaagt gacccttgat tgttaacatc ttgatct
                                                                  4547
```

<210> 2 <211> 29133 <212> DNA <213> Homo sapiens

## <400> 2

aaaaaattaa gtatataaag tttaaaaaagt tagagtaagc taaggttaat tattgtagaa 60 aaacattttt cataaattta atgttgtctt agttacagta tttataaagt ctacagtaat 120 gtatagtaat geettaggee etegeattea eteaceaete aeteaetgae teateaggge 180 aacttccagt cctgcaagct ccattcatgg taagtgtcct agaaagatct accatttaaa 240 aatctttcat atggtatttt caccacacct tttgtatgtt tagatacata aacagttagc 300 attgtgttac aattaccaat agtattcaat acagtcacat gctgtacagg tttgtcgcct 360 aggggtaata gggtgtacca tatagcctaa atgtatagta ggctataaca tctagtttgc 420 gtaaggacac tctgtgatgt tcacacaaag atgaaatcac ctaatgacac atttcttaga 480 gcttgtccct ttagctaagt gatgcatgac ttcagttttg ccccatttct agagcatagt 540 cctcaatgac tttcaatgaa aaacccgata gctttcatct tctcaatcct gaagagctga 600 aggagattta ggctgaactt aaagaaattt tcagcttagc tcattagtct tctactccat 660 acatetteaa eatttaacaa qtqttttqaa aaaqacaeet acaaaqtqet tqaaqteate 720 aactctcaaa tcttgtcatt gcagcaccac gtcaaatgac aaaacacttg ctattttctt 780 agtccactgg aggagcctat tgtcagaggc caaacctgga ttattagctc caaacaagca 840 ctcagatcag taagtgtcct caggtgataa gtggttgttg ctacttggca tcaattcacc 900 agttettetg aaacttaegt etgttttgtt ttagggeeet tateaatggt aggtetttgt 960 ttcctcaaca ccactggaca gtgaaagatt ttgcactgcc tttcagaagt tgacacttta 1020 gttttttgtt ttaccttcta ccgtagcatc agaagttaac caacgtgttt tgaagaaacc 1080 agagtgtttg agatgcctca gttttctagt tacatcacac tggccccata attgctgctg 1140 atttctttct tacagcagaa aactgtagga aaattgtagc agaaaacttt tctacagcag 1200 aaaacggtag cagaaaaatg gcactaaaac gcagcgtaca cttgcaaaca gcaaatgcta 1260 ccaagagaaa cagtgatgtc caaacgtcag cttacatttg catggttctt ctttggaatt 1320 tttattcatc tagtcctatt tactttctta gctaaacaat gctttttaaa aatatacctt 1380 taaaatttta teetattttt gtagttgttg ceagtgggae aatttgteet aetgtgaeee 1440 taatgcatct tatactgtgg tggaaaaaag aataagattt taaattgtgc tttctgaaaa 1500 actggatata gaaacagaca atggccagac catatataaa aataggcctg gctgggcacg 1560 gtggctcacg cctgtaatcc cagcactttg ggaggccaag gcggatggat catgaggtca 1620 agagatcgag accatcctgg ccaacatggt gaaacccctg cctctactaa aaatacaaat 1680 ttagctgggc atggtggcgc gcagctgtag tcccagctac tcgggaggct gaggcaggaa 1740 aatcacttga gcccaggagg tggaggttgc agtgagctga gatcgtgcca ctgcactcca 1800 gcctggcgac agagcaagac tccatctaag aaaaaaaaa aaaaaataga cctttgaccc 1860 acageetaca geageetgee tggggaacea atteeettat etteaataaa eaateeagea 1920 aggtagtctg cttaagtccg acttgcagga agtcagattg ctgtctctag taacaatcca 1980 ggaggctaaa taataacttt tataacaatt gttttaaaat ggccaggact tgattaataa 2040 ctgacagttc ccccaatatt tgtgcctgct tccaacttag gaccaaccag ggaaagctaa 2100 atatgcatcc tacccaatta cataggatac tccacttcta gttacccctt aagcattccc 2160 catgccaaca gcctccaatc aggtcctttt taaccactat aaagtttcct acttctttgc 2220 ctgtctttga gtctctgcca aaatgcaaaa gatggtggct gactcctttg ttatagcaat 2280 ttgtgaataa tttttgctct tttcatttgg ttgatcttca tgtattttca cattattaag 2340 ctttatataa attaaaatcc aagaggctaa catttaatta atgacattta agatcttcta 2400 tatcggataa tgctatacat tatattaggt ttaatatttc tattaaatat agatttagta 2460 aattactaaa aatgctaaaa attcatcaaa tatatatgta agtacaaata aggaaaatgc 2520 aaagagagat attagaaagg ggtaatatat tcaggaataa atattcaaga tattttaagt 2580 tggagatatt gtctgttggt actaaatcaa tttccccctg ttttgtgctt ttttccatat 2640 cacttggggt tgaagcctgg acaccacttc ttccagagtc cctttcttag gaaggcactc 2700 acttgcgatt agaaggcagt ggaaaattgc tgtcattctg cttctgacag caagtagcag 2760 cagctgccag gagtgtgggt ttgtttagtg ctgcagggcc aatagtagct tcctgcagtt 2820 cctgaccttt ggaagcacaa ttttgctttt tctgtcctta caaaactttt gcaatgcact 2880 tcactgtatt acatctctct gggcttaaaa taccttgagt gtgttttttc ccccttgtaa 2940

```
atctgggcta gactgaataa tcttgtaagt atgtaaatat aagcaactat tttaaaataa 3000
cctgggtttt taaatgtaat acagatgctc ttcaacttat gatggggtta actcccaata 3060
aatccagtgt aaattgaaaa tattgtgagt tgaaagtgta gagtataagt tgttcacctt 3120
catgatcatg tggctgaggc tgcctggcat tgtgaaagag tatcttactg agtatcgctg 3180
gtctggaata agatcaaaat ttaaagtatg gtttatacag aatggatatt gcttttacac 3240
cattgaaaag tcaaaaattc ctaagtcaaa ccatcttaag tcaggtgtgt ctgtagtttt 3300
aaaaaaatta caaataaaga atatccagtg ttgttgggag tgcagagaag atttacaagg 3360
taaacattga tttgtttaaa gtttgagaga aaaaattaga taatatgctt tatgattttt 3420
aaatgttaat ttcaaagtaa ttatacattc acaggagttg atgaaaatag tacagagagg 3480
tecettgtae eetteaceca gttteeeca atggttaeat catacataae tatageacaa 3540
tatcgaaaca aggaaatcga cactgataca atgtatttgc agttttctac tttatcacat 3600
gtgtagattc atgtaaccac cactgtgatc aaaatacaga actatattcc atcaccacaa 3660
agatetteet catgecacte geceteetta agagteacae catteececa eccecaceat 3720
ccctacactg tgccaaccac taatttgatt ttcatctgta taattttatc atttagaaaa 3780
tgttatataa atggaattat actatatgtg accttccgag actggcattt tgtactcaga 3840
ataatgccct tgggatctgt attaggtgct ccagagcggt tgtactaaca ggatatgtat 3900
atatagaaag atatttcttt taaagaattt gctcacatga ttgtggaagc ttactgagtc 3960
caaattctga tggaagaggc cagcagtgga ggagactggg acagagttgc agtttgagcc 4020
caaaggtagt ctgctgtgga accaggaaga gccaggattg cagatggagt ctgaggcaat 4080
ctgttggaga gttccctctt atgctagtca ggcattcaac tgattaaatg aggggaaccc 4140
agttatggag ggcaatgtac tttacttaaa atctactgac ttaaatatgt aactctcacc 4200
ccaaaactqc cagattatqt qaaattccat qtcctctact tqqctccatt qacactcaga 4260
tggagtagat taaacaacag acatttactg aaagtcctca cttaacatca tcaataggtt 4320
cttagaagct gtgactttaa gcaaaatgac atataataaa actaatttga ccataggcta 4380
attcagcgat ccccaacatt tttggcacca gggactggtt ttgtggaaga aaattttgcc 4440
atggatgggg gttggggact agcggtggca gggagtggga tggcacaacc tagatccctc 4500
gcatgggcag tccacaatac agttcacaaa ggtttgcact cctgtgagaa tccaatgcct 4560
ctgccgatct gacagcaggc cattagtggt ctgtggccca ggggttggga acccctgggc 4620
taattgatgc gaacaagatt taagttccta tggcttattt ctggtcacaa acacatcacc 4680
aaactcctaa ataaagactc agaacacttc taatattaaa cattaaaata aatgggaact 4740
atatatacat ttaaggtagg tttataataa caagtaagat aattaattat ccagtttttg 4800
gtgaattagt gagtgatggt ggtcacagtg gtggtgggtt acattaagga acaaatgttt 4860
gtaaaatgaa aatggtaagg agcacctcct gccaccacac agctcaaacg caaagaagaa 4920
caaatacgtt gaactcactg agtacttttg taccccattg tttactattg tacagttgta 4980
tgaatatcat gtactttaca aatttttatt ttagaaacat ttctattcat tcgcttattc 5040
attttccaac ctgcttattc cagttcaagg tcatggatga ctggagccta tcccggcagc 5100
tcaaggacaa gagaggaacc aaccttgtat aggatgccat cccatccatt gtgggatgca 5160
tttagactca ccaattaacc taacatgcat gtctttggga tgtgggataa aactcaaata 5280
cacaaagaaa acccatgcgg acgtggggag aacacacaaa ctcctcatgg ccagtggccc 5340
tggccaggaa cctatttatt ttctcaccaa cattgtaaca aaacgttgaa caaaacaatg 5400
ctataggagg accetetgtg ttteteacag teetggagge tgggaagtee aagateaaga 5460
tgctgacagg ttcaattcct ggtgaactta gaactgaagg ctctctggca ggggtgcctt 5520
gtggctgcag gctgggtata gaaactcagg ctccccacta ggcctccact tacagaatcc 5580
tgactgggag ggagagggtc tcatcagcgc tcccacatgg cctctactga caccaggaag 5640
ggagaagtgc ctccttacac ctggacagtg gtgaaagtcc cagctttcta cttggcctcc 5700
tctgacaaca ccttggcaaa gtgggtgagg agtgcttcct tgcaacaggg caggtggaag 5760
tccaggctct tcacatgggc ttcactaaca ccacagtgtg gaggtggctg attactgata 5820
ggcaggggca aaagtcctag gtccccagtt ggcttcctct gacataagcc tgatgggtct 5880
aggtagtgtc tcattatcgc caggcaatgg gataagacaa agctcctcac tcagtgtttg 5940
ctgactgagg cgggatggaa gcccctgatt tttctgtatt tgactggagt agtgcggtta 6000
ctgtcagtta tctgcctggt aggctgctct ttcttgttcc cttggataga gaaacatgct 6060
ttccttagga tatttttgtc tgtgactact gatgtttcct gttttccagt ttctccagca 6120
ctcattcctg gatatattag gcagaaagaa gacctatgaa actcaccact ctgtcattcc 6180
ccaatcccat ggtctgaggc caacctgctt ctcctctcca tcattcaagg gctttttatg 6240
tetgtetgta getgtaetta geaggaagaa taggaagaat tgtaeetaet teatettgte 6300
ttagaaccag aaatctctca ccatattttt taaaatatgt ttttgtcata tattaaaata 6360
```

ttatacatct	atccttagat	ccttaaataa	acatataatc	tatccttaga	gttaagttaa	6420
tttggtaaca	aaaataaaac	aagactaaaa	ctattaattg	tgttaaagcc	ataaaaaata	6480
tgcaaatttt	tgcccaaaat	atgggaaatg	tgcgtgtgtg	tgtgtgtatc	tcctatgtat	6540
acacataaaa	aaagacataa	aatgaaaatt	gctgatgtat	caatacccgg	gggcagggag	6600
tattctcagg	tttaactaag	tactcatatt	caagttttta	ccataggcca	cacctggctc	6660
tcagattcac	ttagaaggat	attagacagg	agtcaaagta	tgccaaagtg	ctgaatcagg	6720
tctttttctt	cagtgggaga	agttcttgaa	acagttcata	atttattcca	ggtgctagtt	6780
tcatcctctg	ccccatccc	ccaagtgaca	actcaggtac	aaggagctga	atttacacct	6840
gtggaagttg	tgtccaccgt	agcttagaat	cctcatgtca	tctacgagct	agtacctctt	6900
ataacaaacc	catgggcaca	gcttccagag	tccccgtaaa	gggcatgctc	agttacaagg	6960
gtcactgcat	ttggaaatac	ccaaactatg	ggtccccgtc	atttgttacg	gttcatgaaa	7020
tattcttccc	agtaaagata	caaaatgcca	accagaagcc	atttgtgcca	taagcaatgt	7080
tgtctaaaaa	tccagctgac	attcttcctc	catcaggttt	ccagaaaaca	gctagaaaat	7140
tagcctaaga	ttaaatacat	catggagaag	tagaaagggt	gttataaagc	atttatccac	7200
aagattcaaa	atgaaataca	gttaattttg	tccgttttaa	gacattattt	caaccttcaa	7260
attatttaaa	agaagtacat	cctatatttt	gtgtgcttat	tcaaaaaagg	catggtaata	7320
cttataaaaa	gactttaaat	atttttataa	gttttaaata	ttttataagt	aattttataa	7380
atgaaattac	aaaccattta	agtgacctaa	ttaaatcaaa	cacactttga	gtatgcacac	7440
aagaaaaaaa	ttagttgaag	catcctgact	taagaaatcc	ttgatctttc	ataaggtgtc	7500
tgaatactca	atgtcaaaaa	cacttatgaa	gaattaaaca	ctgttgacca	caagagggaa	7560
acctagtccc	agttatacta	taaattagaa	aatcaaggga	aaaatatgtg	tcctgagaac	7620
ttttgaaata	gtcacatata	aacatagtat	acaagaaaaa	accaaccgtc	atccctaccc	7680
aaggatatgt	ttgtggtatg	agtggtttta	gtgttttgag	tggactggtt	cttggactcc	7740
acatattatt	ggctacagag	atagagactt	gatttagaaa	atcacagttg	ccactttcta	7800
agtaagccct	tgaccaaaag	actagatttc	tttaaaccca	gttttctcag	gtaaaatgga	7860
aatacaacta	ttatctaata	aatataagta	agctttagtg	tcatagtcat	agcagtagta	7920
ttttcaattg	gtaaaaagaa	actggacccc	aaaaaagaat	ttcagtgaaa	gcagtaacag	7980
tcttctggca	tatttctcac	ctttcttct	accttaaagg	ttcaaagttc	ctaagtaatc	8040
tcagaaacct	aaaatagttt	attctctatc	ctcactattg	gtttttaaaa	aacattttgc	8100
agcatggacc	actgctcatg	tacagatgct	ctccaactta	acaatagggt	tatgtcccaa	8160
taaacccatt	ataacttgaa	aatatcttaa	gctgaaaatg	catttaatac	accaataaac	8220
ccatcataaa	gttgaacaat	cataagccaa	attataagtc	agagaccatc	tgtattagct	8280
taagtcttgg	aatggtttat	tttttagatg	ccatttagcc	acttatattc	tcttctattt	8340
tattgtgaga	actaattccc	ctcttacatt	ctgtgcttga	cccatgctat	acttagtgtg	8400
aacaagagcc	accttcttct	catgacttct	atttttttgt	gaaaatttcc	ttcactcatt	8460
cacgacattt	ggatttgaaa	tcttacctac	ttaagtactt	taaaaaatca	ttttctacca	8520
tctttcttat	caggagcctc	tagtgattcc	ttctccacac	ttctaacttc	tcatcttcac	8580
actccttgtc	ttcctaactt	cactacagta	agtgttttac	atgtttagaa	ctcagctcct	8640
ttactatgat	tgctaaccat	gtaccttaaa	taaaccgtct	tctagttttt	tgtttcttac	8700
tctcaattat	accttttaga	aaagaattaa	gagtagaaaa	agactgctac	atagacattc	8760
ttatgatctt	cagaaatgag	cacagatcat	gcttaatgaa	aaaagatttc	caaataatgc	8820
tgcatatgtc	cagagaaaag	gtggcagaaa	tgactgtcgt	ttgggggcac	tattgtctgg	8880
acatggccag	ttctcagaac	tccagtccct	aaattccctt	ctaactaaag	gaaaagcctc	8940
ttaagggtct	tatagaaatc	ctgccacttt	cacctgaaag	aataatcttc	agttatgtgg	9000
cacatggcca	agagtaaaag	tctttagtca	cttggaagca	gacagacact	gtaatgctaa	9060
ataattggac	ataacatgga	acttactgag	gcctcaaata	tcaattttac	tttgggaaaa	9120
agagcagcaa	ctttaaaagt	gattgaaagt	aactcaagtt	tattccttaa	cagagtgatg	9180
cttaatctaa	caaaaaacat	gttatatgca	cactcttctc	cattaccttg	taagaaaact	9240
ggactaggaa	acacagctga	aatggccagt	tctgcctcca	tttcctaaac	cgtgttataa	9300
ttatgtctat	gtgaccagta	acagacaatg	accatgattt	atactttttc	atatgtttgt	9360
tgttttgttt	tcaatgtttg					